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ABSTRACT

The four papers in these proceedings provide a comprehensive picture of the rationale, methodology, strengths, and limitations of case studies. In "Doing Justice in Evaluation Research," David Hamilton argues that the application of scientific methods to the study of social systems has given us a false illusion of certainty. He offers an alternative view, driven by a concern for justice rather than by scientific efficiency. In "Illustrative Examples of Case Studies," Constance Leean uses a story of Mr. Rock, a rural Vermonter, to capture the flavor and spirit of the case study process. Her chapter provides the reader with the essence of this kind of research: the emotions, the friendliness, the surprises, the understanding. In "Case Study Methodology: An Epistemological Advocacy," Robert Stake urges readers to rethink their notions of the rational and the intuitive. He argues that case study knowledge is unique in that it extends and refines personal and experiential knowledge. In "Case Study Methodology: A Critique," James Sanders describes evaluation as a form of disciplined inquiry which is guided by certain tenets and argues that case studies must adhere to these criteria. He also points out some difficulties in the approach. (BW)

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CASE STUDY METHODOLOGY IN EDUCATIONAL EVALUATION

Proceedings of the

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Editor

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INTRODUCTION AND OVERVIEW

by Wayne W. Welch

For several years, the accepted evaluation paradigm has been the controlled experiment. It is the dominant research model for the physical sciences and psychology and the one that most evaluators were exposed to in graduate school. But concerns about the difficulty of implementing experimental studies of human service programs and the limited success enjoyed by them have led to a search for alternative approaches. The search has resulted in several non-experimental approaches including case studies, illuminative evaluation, service delivery assessment, goal free evaluation, and naturalistic inquiry. These strategies differ from the conventional inquiry methods in many ways, but two key departures are the reluctance to impose investigator constraints upon the system to be studied, e.g., random assignment to treatment groups or to use pre-determined outcome measures, e.g., pre-tests. Derived from anthropology and investigative journalism rather than from agriculture and physical sciences, these approaches study objects or programs within and in relation to their naturally occurring contexts. The emphasis is on description and portrayal rather than on facts and explanations.

One of the more popular "new" approaches is the case study method as described and advocated by MacDonald and Walker, (1975), Smith, (1978), and Stake, (1976). A case is the object of the study. An individual, program institution, collection, or whatever bounded system is of interest to the evaluator and his or her client can be the case.

Because of the growing interest and acceptance of this naturalistic paradigm, it seems appropriate to examine it carefully as an evaluation method. What are the philosophical underpinnings of this inquiry form that allows for multiple realities and is portrayed as providing more valid information than survey or experimental research? What does a well-done case study contain? Why and when should evaluators use a case study approach - or should they? Answers to these and other questions are in the set of papers which follow. Together, they form a comprehensive picture of the rationale, methodology, strengths and limitations of case studies.

The papers were presented during a day-long conference in May of 1981. The speakers were selected because of their experiences in the area. They were asked to address a specific aspect of case study methodology. The speakers and their topics are listed below.

David Hamilton - "Doing Justice in Evaluation Research"
University of Glasgow, Scotland

Constance Leean - "Illustrative Examples of Case Studies"
University of Vermont

Robert E. Stake - "Case Study Methodology: An Epistemological Advocacy"
University of Illinois

James R. Sanders - "Case Study Methodology: A Critique"
Western Michigan University

OVERVIEW

"...it is not our world that fails to live up to our science; rather it is our science that fails to live up to our world," claims David Hamilton in his introductory paper, **Doing Justice in Evaluation Research**. He argues that the application of the scientific methods to the study of social systems has given us an illusion of certainty. But it is a false illusion and it is unjust to claim otherwise. He offers an alternative view; one driven by a concern for justice rather than by scientific efficiency.

Hamilton is one of a group of British researchers who have exerted considerable influence on evaluation by questioning the value of traditional experimental approaches. His current paper continues this challenge with a call to recognize and accept multiplicity; multiple evaluations, multiple causes of action, even multiple truths.

"In our study, we created only a few ripples of understanding and yet came away moved and changed by the experiences." Constance Leean uses a story of Mr. Rock, a rural Vermonter, to capture the flavor and spirit of the case study process. Her chapter provides the reader with the essence of this kind of research; the emotions, the friendliness, the surprises, the understanding.

Dr. Leean offers insights into the decisions and processes used in the study and blends these nicely with the case report. The story of Mr. Rock, the rural adult learner, is presented in its entirety as an illustration of a case report.

Robert Stake urges us to rethink our notions of the rational and the intuitive. He writes, "I protest that it has been the intuitive and not the rational that helped man survive when the stronger beasts were his adversaries and the most elusive were his quarries. The fact that our jungle has changed does not lessen the importance of the intuitive." Stake presents a compelling argument that case study knowlege is unique in that it extends and refines personal and experiential knowledge. He believes that for some issues and workings of a program, it is the preferred evaluation method.

James Sanders provides a perspective on case studies as evaluation techniques that is more restrictive than his predecessors. "The key elements of evaluation as disciplined inquiry and reflective thinking, as I see it, are purposive and systematic search; explicitness in reporting descriptive information, criteria on which judgements are based, and the logic of the inquiry process; openness to criticism and public display, and painstaking care in examining, confirming, and reviewing the arguments and bases on which judgments are made." He sees evaluation as a form of disciplined inquiry which is guided by certain tenets and argues that case studies must adhere to these criteria, to qualify as disciplined inquiry, as well. Sanders points out some of the difficulties of the approach, e.g., time required and the need for competent researchers; however, he sees value in the method for certain evaluative situations.

As a set, the four papers present a rationale, an illustrative example, some justification, and several cautions. Readers considering the approach, as well as supporters and critics alike, will find useful information in this monograph.

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DOING JUSTICE IN EVALUATION RESEARCH

by David Hamilton

My role, as I understand it, is to provide a prologue to the ensuing, more specific papers. What I have to say, then, relates to a number of topics. These include the purposes of educational research, the role of social science in modern society, and the significance of methodological debates in science. Overall, my aim is to sketch some of the context that gives meaning to today's deliberations.[1]

My reasons for adopting this wide-ranging stance are twofold. First, it helps me to underline the fact that many of the issues raised about educational evaluation are also important to educational inquiry in general; and, second, it enables me to treat evaluation questions not merely as matters of methodology but also as matters of ethics and epistemology.

Innovation and Change

As a visitor to this country I never cease to be amazed by what appears to be a constant drive toward innovation in all spheres of life. Innovation is celebrated as a new frontier that itself is in a state of permanent renewal. Where I come from, a different story obtains. Innovation is deemed a maverick, upstart activity. British innovators occupy the shady margins rather than the leading edge of society. Indeed, "entrepreneur" is such an unspeakable title that the British had to turn to the French to find a label for it.

The contrast I have drawn between conservative Britian and free-booting America is certainly exaggerated, though I think there is a real sense in which the innovation market and the turnover of ideas are taken for granted in the USA. But there is another side to such an innovation-led economy. Does innovation necessarily promote change? Or is it the case that, under conditions of rapid innovation, change is more an illusory phenomenon—a social sleight of hand created through the sacrifice of substance to appearance and fabric to fashion? Further, if this illusion is successful, are consumers lulled into a state of false consciousness? Do they assume themselves to be the beneficiaries of innovation? Or are they, in fact, its unwitting victims?

Let me bring my argument a little closer to education. Do the changes we talk about really reflect some kind of directional shift toward a deeper or more immediate appreciation of educational phenomena? Or are they merely novelties that have been produced for sale in the academic marketplace? Is the topic of this conference, as well as our presence here today, the outcome of relatively random forces? Are we just promiscuous followers of fashion,

pursuing case study methods today, structural equations tomorrow, and something else the next day?

I am sympathetic to such an analysis, but I do not believe that it provides the whole story. Day-to-day shifts in education may appear to be promoted by random or "local" causes; but, in the long run, a number of more profound, if not irreversible, factors also play a part. That is, the dynamism of a nation's schooling is also affected by changes in a nation's economic structures, political systems, religious affiliations, cultural identities, and so on.

Doing Science or Doing Justice?

Today I'm going to focus upon the relationships between educational inquiry and some of these broader shifts. The voices that I am going to take seriously are those which, over the last twenty years or more, have argued the case for greater justice in social action. The burden of my argument is that the search for "alternative approaches" in evaluation is part and parcel of the same movement. Above all, I think that the most important contribution made by recent evaluation theory to the mainstream of educational inquiry has been an increased awareness that "doing science" is one thing while "doing justice" may be something else.[2]

The European scientific revolution of the seventeenth century, with which we associate people like Francis Bacon and Isaac Newton, was premised on the assumption that nature could be induced to give up her truths if tackled in a new way; that is, through observation and experiment. The scientific or empirical method as we know it today can be traced back to that era. It constituted a new technology that claimed to be more powerful and efficient than anything previously envisaged. Mankind was no longer regarded as being in harmony with nature. Henceforth, the relationship was to be one of domination and subordination.

The extension of mankind's dominion over nature was the promissory note issued by Bacon and his contemporaries. They believed that the scientific revolution would usher in a period of great social wealth and even greater personal and political freedom. In its most democratically organized form the scientific revolution promised a heaven on earth for everyone. The social budget drawn up by its protagonists assumed that technical efficiency would lead to the creation of a material surplus which, in turn, could be redistributed to alleviate misery and poverty for all time.

The Social-Scientific Paradox

The aspiration to control nature, however, also triggered the related sentiment that a comparable technology could be developed to control the workings of civil society. The nurturance of this idea was a key feature of the eighteenth century Enlightenment; and its rise to maturity in the nineteenth

century was intimately tied up with the emergence and establishment of such disciplines as economics, sociology, psychology, and, not least, education.

With the wisdom afforded by hindsight, I think we now recognize that the social-scientific revolution was built upon the paradoxical core assumption that the purpose of the social sciences was to extend mankind's domination over mankind. Before the nineteenth century such an assumption was unproblematic; a large proportion of society was denied the civil rights enjoyed by the remainder. Thus, the original purpose of the social sciences was perfectly consonant with a "two nations" image of society. Accordingly, social scientists were able to develop a rationale and technology which, explicitly or implicitly, took only indirect account of the feelings and aspirations of those whose lives they intended to reform.

It was a time when the expert "knew best" and a time when the administrative solutions of the experts were deemed to be "in the best interests" of their clients. The justice of such methods was underwritten by an appeal to the principle that what is good for society is also good for every individual; and the plausibility of such methods was assured by the fact that they operated within expanding national economics that were always able to provide a little extra for everyone.[3]

Scientific Method as Problematic

The net result of these nineteenth and twentieth century movements is that educational research has inherited a science that is assumed to constitute a disinterested technology of social engineering and a benevolent source of positive social advance.

I am sure that it will not surprise you that I am skeptical of this ahistorical view of science. In particular, I discount its claims to have found a set of universal or absolute standards—"the" scientific method - against which other forms of inquiry are judged and usually found wanting. My own view is that any methodology, like any course of action, necessarily has an ethical dimension and that, accordingly, if we change our ethical criteria we are inexorably led to a reconsideration of our practice.

Thus doing evaluation is not the application of a universal method but, rather, a constant striving to resolve—for every new occasion—the essential tension that suffuses our concept of social science. And it this striving that is one of the subtexts of this monograph.

Let me amplify my argument by taking a closer look at the "universal or absolute standards" that I referred to a moment ago. In particular, I would like to demonstrate certain problematic features of our current use of the concepts of efficiency, truth, and objectivity in research.

Efficiency and the "True" Experiment

Nearly twenty years ago Donald Campbell and Julian Stanley focused on the problem of efficiency in their seminal paper on "Experimental and quasi-experimental designs for research on teaching".[4] Their work was an explicit attempt to extend the rationale of biological experimentation into areas where experimental control is less than complete. Two features of Campbell and Stanley's paper are pertinent to my argument. First, it was a formal analysis, having more relevance to the design of experiments than to their implementation; and, secondly, through its discussion of external threats to validity[5], it noted that the results of "true" experiments may be open to multiple interpretations. Put another way, their paper was about the reduction of uncertainty in the social sciences, not its elimination.

A few years later Campbell revisited these earlier ideas in a paper entitled "Reforms as experiments."[6] His particular interest was the contribution that the social sciences might make to the "Great Society" legislation of the 1960's. His paper concerned itself with the "political realities"[7] as well as the technical logic of experimentation. And, by the same token, it was addressed directly to the reforming administrators, or "social engineers",[8] of that epoch.

In the course of this argument, Campbell ran up against a general problem in experimental research: the social experiment conducted along traditional lines depends upon the extent to which control or randomization can be applied to the context of the investigation; yet, the achievement of such social control, through the manipulation of "haves" (the treatment group) and "have nots" (the control group) may come into conflict with new, or Great Society, assumptions concerning social justice and democratic freedom.

In the late 1960's, then, Campbell noted the intractable nature of the problem but, at the same time, came to the defense of the experimental model when he claimed to have identified a set of experimental conditions wherein randomization was not at variance with social justice. That is, he had found a situation where, even in Great Society terms, the efficient experiment was the same thing as the just experiment. The particular design requirements noted by Campbell related to the allocation of "social ameliorations" that are in "short supply."[9] Campbell argued that under such conditions it would be impossible for everyone to receive the benefits of the treatment and that, therefore, randomization was both technically and ethically defensible.

Campbell's argument, which was based on a discussion of the Salk vaccine trials, is very plausible but flawed on at least one count: the Salk trials are not a general instantce. On that occasion, the experimental subjects received a treatment of presumed benefit, whereas the control subjects were deprived of something (immunity to polio), which, in fact, they had never enjoyed. Thus, contrary to his claim, Campbell's exemplar embraced only instances where benefits were randomly withheld, not instances where benefits were randomly withdrawn. In the second case, of course, the deprivation is much more visible to the deprived.

For these reasons, then, I would expect randomization experiments involving increases in grant aid to provoke a different consumer response from

those that entail cuts in grant aid. In short, the research designs proposed by Campbell may be logically equivalent, but they are not socially equivalent. Despite his claim that "this is the ideology that makes possible 'true experiments' in a large class of social reforms,"[10] Campbell's attempt to reduce social justice to social efficiency must be regarded as unsuccessful.

The net result of Campbell's efforts, of course, is that a twentieth century tension is still resolved in favor of a nineteenth century conception of the relationship between science and justice. That is, "organizational efficiency" and the "scientific organization of society"[11] are still deemed to be consonant with the interests of the individual.

In subsequent work Campbell has retreated from some of his earlier positions and has been less ready to settle in favor of managerial models of control and efficiency. For instance, in a paper directly related to the themes of this monograph, " 'Degrees of freedom' and the case study,"[12] he discussed the value of adopting procedures which, unlike those of "true" experimentation, deliberately allow "innumerable alternative solutions."[13]

But Campbell's new-found support for case study methods still relied unilaterally on technical criteria. His argument was that the convergent nature of experiments limits the number of hypotheses that can be examined whereas the multi-dimensionality of case studies allows many more explanatory hypotheses to be scrutinized, including those that were not envisaged at the outset of the research.

Truth in Research

But, you might ask, doesn't the possibility of alternative solutions also include the possibility that no one solution will emerge as "the" explanation? And doesn't this possibility, in turn, undermine the expert status of the researcher? This question brings me to the second issue I raised earlier: truth in research.

The problem of truth, or, put another way, the problem of uncertainty is ever-present in social research. It even exists, as I showed earlier, in the organization and interpretation of "true" experiments. In an important sense, however, the uncertainty does not reside in the phenomena that we are trying to study but in the way we value them.

Let me offer an example. Imagine two young children: one who can count up to five and the other who can count up to ten. Six weeks later the first one has moved up to seven digits and the other one has moved up to thirteen. The question that might be asked about these children is "which one has made the most progress?" At one level this question is absurdly simple; but at another the answer given can only be arbitrary. As this example suggests, the facts do not speak for themselves: they merely beg further questions.[14] In the instance cited, any answer will hinge on whether the initial differences between the children are taken into account. That is, it depends on the moral valuations that we bring to the task. Do we treat the children and their circumstances as different or equal? How, in technical terms, should we "weight" them?[15]

The traditional reaction of educational researchers to the challenge of these and other empirical uncertainties has been to treat them as problems of technical rather than ethical clarification. It is assumed that they can be solved by using a higher level of methodological sophistication; for example, by using multivariate rather than bivariate satistics. The result, of course, has been the pursuit of a spurious precision in research, itself driven by the popular but mistaken belief that the problems of research can be reduced to the realm of methodology and technique.

Such activities are easily driven forward. Their technical precision sustains an illusion of certainty. But, as in life, there is always the risk that procedural consensus will break down and be pulled apart by the different valuations adopted by the protagonists. At first glance, this possibility seems remote. Yet it is the very issue that has fueled the debates and recriminations surrounding the Head Start and Follow Through evaluations.

When we hear the call for results, do we have sufficient resources to back up Bacon's promissory note? Are our procedures as "hard" as we would like to imagine? Does our delivery record match our funding talk? I think not. In practice we operate with standards that are more double than absolute. Our professional misgivings about the certainty of our procedures are, more often than not, expressed as public silences. Our audiences, therefore, still expect us to furnish a kind of "out there," theory-free truth which, increasingly, we know we cannot provide. Must we continue our cover-up? Or can we offer an alternative view of the social sciences?

Objectivity and the Independent Observer

The professional misgivings and public silences that relate to conventional notions of truth also apply to objectivity, the last issue I shall address. If education, like physics, is regarded as an exact science, then objectivity and exactitude are taken to be synonymous. Researchers are assumed to occupy a privileged vantage point, one that enables them to render accounts of the world that are uniquely free of error or bias. Hence, a drift toward subjectivity is, at the same time, considered to be a drift away from the truth. But physics provides us with an alternative perspective on truth and objectivity. Since the publication of Einstein's "Special Theory of Relativity" in 1905, it has been more readily appreciated that any description of the world is dependent upon the time and space location of the observer. Thus, the objectivity of any observation, like its truth, always depends on the personal knowledge or on what amounts to the same thing, the ethical standpoint of the observer.

These assertions of a physicist about the convergence of truth and subjectivity may seem a little remote from the hurly-burly of education inquiry. But, again, they served as an important (if uncited) precurser of Donald Campbell's paper on "Qualitative knowing in action research,"[16] which

was read to the American Psychological Association in 1974. The purpose of Campbell's address was to revisit some of the issues that had been left out of his earlier discussions of "quantitative-experimental" approaches to social research. What is even more important to this conference is that he included "case study"[17] as contributing to the "qualitative knowing" of the social sciences.

Set against Campbell's earlier papers on "Experimental and quasi-experimental design" and "Reforms as experiments," "Qualitative knowing in action research" has two noteworthy features. First, it rejects managerial models of control by counterproposing the value of "participant evaluation"; and second, it takes the convergence of subjectivity and truth to the point of suggesting that the experiences of "participants" are more "valid" than those of "outside observers".[18] Overall, Campbell's "qualitative knowing" paper is significant in that it demonstrated, for him at least, a hitherto unacknowledged awareness of the essential tension that pervades the social sciences. Whereas Campbell's initial methodological strictures arose from an apparent concern with efficiency, by 1974 the concern for social justice was more obtrusive. But, to this day, the problem of combining a "top-down" model of efficiency with a "bottom-up" model of justice seems to have proved as intractable to Campbell as the earlier problem of divining the "true" experiment.

Toward an Alternative Social Science

Let me pause for breath. So far in this paper I have identified a tension that I believe is inherent to social inquiry in general and to educational inquiry in particular. I've also noted that while working in the context of expanding economic systems, social scientists have been successful in drawing a technical veil over these issues.

In this monograph I have tried to pull back a little of the veil. I have questioned some of the assumptions that have guided social science practice for many years. Together they underwrote a science, a technical-ethical calculus, that somehow was deemed to be beyond society. Hence when the science failed, it was the earth-bound practitioners who were blamed. "You didn't do it right" was the charge made against them. But it is not our world that fails to live up to our science; rather, it is our science that fails to live up to our world.

Where then does that leave us? I suspect that if you came to this conference worried about methodology you are feeling even less comfortable now. You came looking for solutions and all I have been able to offer are irresolvable ambiguities and infinite regressions. First you saw black boxes in research; now they have turned into black holes. But take comfort; you are not being deluded.

In a very real sense, methodological debates are no such thing. That is, they are not purely about technical matters. Instead, they are driven by all

kinds of theoretical, ethical, and social concerns. Indeed, the lack of consensus that creates such a debate is, I believe, a reasonable response to the many different ways in which the efficiency/justice tension can be resolved in the social sciences. But where do these ideas spill over into the realm of "case study methodology in educational evaluation"? To conclude, I shall suggest two points of departure.

First, I find it useful to consider an evaluation, formal or informal, as an intervention in a debate whose terms of reference and criteria of worth are never quite the same as those addressed by the evaluation. This may arise because the evaluation addresses only a subset of issues or because the debate itself is constantly changing. Either way, the evaluation can never replace the debate; that is, it can be only a sensitizing device. It always remains "an" evaluation, not "the" evaluation.

And second, I find it useful to remember that the context of an evaluation or case study is not the same as the context of the action that might flow from it. That is, other circumstances and other audiences may intervene. Necessarily, then, a case study evaluation can only suggest "a" course of action, not "the" course of action.[19] If we try to offer any more than these gentle promises we too may be guilty of a double standard in our work.

In preparing this paper, I worried whether I was devoting enough space to case study and evaluation. Now I suspect I've said too much. Nonetheless, I hope my remarks provide a suitable backcloth to the remaining papers. My belief is that there are substantial links between the general topics of my paper and the current concerns of evaluation research and case study inquiry. I hope, therefore, that what I have said contributes to building a bridge between your own experiences and those that are to be examined in the presentations that follow.

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1. For two volumes that present more exhaustive analyses of case study and evaluation see H. Simons (ed.) ***Towards a science of the singular***. Norwich, England: Centre for Applied Research in Education, University of East Anglia, 1980; and T.S. Popkewitz and B.R. Tabarchnick (eds.) ***The study of schooling: field-based methodologies in educational research and evaluation***. New York: Praeger, 1981.

2. For an extensive discussion of justice in research see E. House, ***Evaluating with validity***. Beverly Hills: Sage, 1980.

3. It is no accident that our social science paradigms took shape in France, Germany, Britain and the USA. It was only in such economically powerful countries that the essential paradox of the social sciences could appear to have been resolved. For a more extensive discussion of nineteenth-century social science see D. Hamilton, Educational research and the shadow of John Stuart Mill. In J.V. Smith & D. Hamilton (eds.), ***The meritocratic intellect: studies in the history of educational research***. Aberdeen: Aberdeen University Press, 1980, 3-14.

4. See N. Gage, (ed), ***Handbook of research on teaching***. Chicago: Rand McNally, 1963, 171-246.

5. The distinction between internal and external validity seems to date from D.T. Campbell, Factors relevant to the validity of experiments in social settings. ***Psychological Bulletin***, 1957,54, 297-312.

6. The original version of 'Reforms as experiments' appeared in the ***American Psychologist***, 1969, 24, 409-429. This paper uses the version in E.L. Struening & M. Guttentag. (eds.) ***Handbook of evaluation research (vol. 1)***. Sage, 1975, 71-100.

7. Ibid., p. 72.

8. Ibid., p. 84.

9. Ibid., p. 86

10. Ibid., p. 87

11. Ibid., p. 72

12. ***Comparative political studies***, 1975, 8, 178-193.

13. Ibid., p. 184

14. For a witty and penetrating critique of the notion that the facts speak for themselves see K. Harris, ***Education and knowledge***. Boston: Routledge and Kegan Paul, 1979 (especially pp. 10-18). Also see H. Freeman & A. Jones, Educational research and two traditions of epistemology. ***Educational philosophy and theory***, 1980, 12, 1-20.

15. For an early and lucid discussion of the practical and ethical issues in the assessment of learning see R. Stake, Measuring what learners learn. In E.R. House (ed.) ***School evaluation***, Berkerly: McCutchan, 1973, 193-223.

16. In this paper I have used a mimeo version of the original talk.

17. Ibid., p. 1.

18. Ibid., p. 26.

19. For a more extensive discussion of evaluation that is in tune with most of the ideas in this paper see S. Kemmis, Seven principles for program evaluation in curriculum development. School of Education, Deakin University, Victoria, Australia, 1980 (mimeo). Kemmis builds his argument around the thesis that 'evaluation is the process of marshalling information and arguments which enable interested individuals and groups to participate in the critical debate about a specific program'. See also Ruth Anne Olson's work in Minneapolis described in ***Evaulation as interaction in support of change***, Grand Forks, North Dakota, North Dakota Study Group on Evaluation, 1980.

ILLUSTRATIVE EXAMPLES OF CASE STUDIES

by Constance Leean

Part I: Mr. Rock

Mr. Rock is a native Vermonter born and raised in a small rural community located in the Northeast section of Vermont. He is 52 years old, has completed 12 years of formal education, and lives alone in a modest home modernized with the help of friends some years back. He is an early retiree from the U.S. Postal Service where he worked for 22 years as a postal clerk. His early reitrement was triggered by a cardiovascular accident suffered several years ago. While Mr. Rock can no longer exert himself as he once did, he continues to remain active coping with this disability by engaging in many personal and civic activities. His pension income, though modest, allows for a comfortable and relaxed lifestyle.

As a young man, Mr. Rock volunteered for the Navy during World War II before completing high school. Apparently, strong feelings of patriotism summoned him to serve his country as he recalled, "I felt an obligation to my home, my state and my country. I was proud to serve them all."

Following completion of the war, Mr. Rock returned to his boyhood home to complete his high school education. He described his early years as joyful and carefree. "I wasn't much of a student," he recalled, "although I graduated in the upper third of my class. I guess you could say I loved life more than school and I tried to extract the most I could out of it!" During this period of time, he studied radio and electronics, a vocation he enjoyed much as his father had. In fact, he spoke often about how his father's interest in electronics fueled his own. He called this time in his life "Getting an Education."

After completing high school, Mr. Rock worked for several years servicing radios and other electronic devices. He labored at great length trying to do a good job, but found the work to be financially unsatisfactory. Therefore, he moved to the Butterfield Division of the Union Twist Drill Company, where he worked approximately four years as a milling machine operator. However, Mr. Rock found the daily commute of 20 miles to and from work a drain on his income, and when the opportunity arose for postal clerk at the local post office, he applied and was granted the job. The postal job was initially part-time and allowed him more time to devote to his growing social obligations and return to his avocational interest: servicing radios and electronics. Calling this period in his life "Work and Community Service," he continued to do this work until his forced retirement at the age of 49 due to a cardiovascular accident which in his words "nearly put me six feet under." During these past years he talked about a "Personal/Social Family Time" which ended after a divorce. Another period of five years he called "Community Activities - Very Feverish" as he became very active in community groups like the Masons.

Mr. Rock's most recent years, however, have been difficult at best. With his marriage of three years ending in a divorce and his present poor health, he characterized the last few years as "sort of blah." This recent period he names "Health Concerns." Despite these problems, Mr. Rock stays busy with the local Masons, and invents energy-saving devices for his home.

Elaborating on a significant crisis or conflict in his life, Mr. Rock described his cardiovasular accident as "the most dramatic thing that's ever happened to me." He recounted how the accident occurred in the following words:

> I'd been to work and I'd come home and was very tired and instead of getting supper as I usually did, I mixed a rye and water and the T.V. was on. It was turned on and I was sort of relaxing you might say, I don't think it was anything particular - as I remember I was watching *Ironside* - and it just happened. I thought I had the radish that time! I sort of lost consciousness slowly - I don't know how long I was passed out and I was slumped down on the divan when I came to. I crawled across the floor approximately twenty minutes later and called the doctor for help.

Mr. Rock vividly described his ordeal that lasted over the next year-and-one-half. The numerous hospital visits, doctor calls and the uncertainty of not knowing if he would ever regain his health made the time difficult at best. He practiced self-denial as his way of coping. "I just wouldn't let myself admit it and I'd say it was a good two years before I began to come to grips with the fact that if that is what is is - you know - the condition is there -there's nothing you can do - there's no changing it." Reflecting over what he had learned from his protracted illness, Mr. Rock talked about how his life has changed.

> Now it's a completely different lifestyle - your way of living, your contract with society is totally changed. You don't socialize, in the first place you don't go out to eat because you're on a diet. you don't go out dancing because the smoking makes you sick. It changes your life completely. I'm also more in touch with myself, my feelings and abilities.

In describing himself, Mr. Rock painted a picture of an average person, fairly simple in demeanor and curious by nature. He enjoys people and likes to see them have a good time, but doesn't like situations where people are putting on airs. Neither grandeur nor money impresses him. He seeks ways to get "around a hassle." On the negative side, he sees himself becoming more opinionated and disgruntled. "I think that faction of me is getting worse as years go by." Overall, he views himself as having the best attributes of both his parents - being kind and giving to others.

While Mr. Rock may describe himself as a simple man, his learning efforts suggest a sophisticated thinker, one capable of working with abstract ideas and then concretizing them in the form of new inventions or plans. A good illustration of this ability is an energy savings modification he made to his

wood stove. The original motivation to design a way of improving the heating efficiency of his Franklin stove was due to economic conditions. The price of oil had risen substantially to a point where Mr. Rock felt his lifestyle to be threatened. He began his project by assembling existing information on heat saving devices. He consulted local friends and heating specialists for their ideas. He read numerous books and magazine articles and through these sources, came upon the idea of utilizing his Franklin stove to heat the water needed for his baseboard heating units. Mr. Rock started by taking measurements of his Franklin stove in order to decide what size water coil he needed. He then drew various scale sketches in order to get the maximum amount of pipe in the available space. He countinued to revise his drawings while searching for required materials to complete the job. He consulted the Sears Roebuck catalog, local hardware and plumbing stores and area salvage yards for supplies. Once the necessary materials were collected, he began to assemble his energy-saving unit. Because of his health problems, Mr. Rock had to proceed slowly, but after six weeks of steady work, completed the project. He then inserted the device in his Franklin stove and was ecstatic to find it worked. As he recalled, "My heat saver worked so well that it saved me at least $300.00, maybe even more, which is far more than the entire project cost. In one season, I've already had my capital outlay paid back."

Reflecting on who or what shaped his learning overall, Mr. Rock talked glowingly of his parents and the way he was brought up. He talked at great length about his insatiable appetite to learn new things and how he needs to know why something works the way it does.

> I'm not one who is satisfied with simply turning something on and off. I need to know why - what's inside. I'm not sure where this comes from, but it's a natural part of me. I'm interested in the world around me and how it works. I've often thought that this is the root of my motivation for why I do the things I do.

Looking broadly at the kind of learner Mr. Rock appears to be, one could represent him as a visual thinker who approaches problems in a logical step-by-step way. As he described, "I usually begin with an image in my mind, and then begin to let it take shape through the many books and articles I read and study. As I continue to look for answers, the image becomes real, whether on paper or in my head." He is also aware that he tends to do a lot of thinking subconsciously. He likened his thought process to that of a computer.

> Often, I find that I have learned something in the interim that I didn't even realize I was learning. It's a subconscious type of thing. But this may go with your mind working but I suppose it's like a computer - today's computer. You know, they keep putting information into them and you press the right button sometime in the future and the things come back the way - well, it's an accumulation of what they put in.

Without responding to any particular question, Mr. Rock commented on his being "slightly psychic." He talked of visualizations appearing in his mind and images of persons or objects which portend the future. However, he tries to shut these experiences out of his mind, since he's concerned about how they might be used. Elaborating on this denial, he said, "I build a wall constantly around anything psychic because I have all I can do to mind my own business...I think it could dominate your life, you know, if you let it have its way and so I keep pushing it away."

As to which form of thinking Mr. Rock preferred, he chose the rational, step-by-step approach. He described himself as a creature of systematic analysis. "I like the rational way of thinking more, it saves you a lot of steps, resulting in fewer mistakes.

Looking into the future, Mr. Rock saw himself traveling leisurely around the United States in a recreational vehicle. This is something he has long wanted to do. His first stop would be Niagara Falls because of his interest in natural phenomena. From there, he talked of traveling to Detroit to see the cradle of industry in action. Of particular interest would be the electronics industry since this is an area of acute interest to him. From Detroit, Mr. Rock would explore the Midwest, paying particular attention to the people, their customs and environment. Montana or Idaho would be his next stop where he would investigate the various mining operations. Mr. Rock talked at length about this stop, saying, "I'd be searching for where the beginnings occur." It is curious to note that he did not mention any health problems connected to all this travel.

Mr. Rock's interest in reducing objects or things to their lowest common denominator, seems consistent with the kind of person he is. He talked of being a simple man blessed with an insatiable appetite for truth and knowledge. Although his health often impedes his learning process - spending excessive amounts of time on one project leads to headaches - Mr. Rock described his daily life as one filled with learning new things or solving problems. "My recreation," he said, "is solving problems and doing things. Sometimes it takes me longer to finish these days, but sooner or later, I'll get the project done."

Things that matter to him most are his friends, family and community. His life is dominated by the pain of his illness. Yet as related toward the end of the interview,

> I can't let a little pain stand in the way of my growing. Life is learning and learning is life. They go hand-in-hand. Don't get me wrong - I have much to learn. But I truthfully can't say that a day has gone by without my learning something new or different.

This connection of learning to living is also evident in Mr. Rock's evaluation of the interview experience.

> I'm quite surprised with the things we have talked about. Quite frankly, I didn't think I had much to offer to a study like this. I'm surprised, I guess, it helped me to see a side of me that I hadn't seen before. The one satisfaction I would get is seeing others benefit from the study.

Part II: Procedures and Analysis

You have just read one case study description out of 14 that were done as part of a National Institute of Education grant awarded to the University of Vermont. For the purposes of this paper, I am going to use Mr. Rock as a centerfold for portraying the process and substance of our particular approach to case study work. I'll also make references to other cases in order to illustrate what we learned while doing case studies. In so doing, I hope to blend actual case material with the processes and decisions we engaged in; a sort of word becoming flesh.

Before I proceed to do this, I want to establish the context of this study. I will ask you to read this account as a case study of a case study. As a case, our particular research may or may not connect with any methodological concerns you have. But as a case study of a case study, it offers some perspectives that you may find helpful. I will be curious to know, of course, if our procedures and tools make sense to you in the situations you find yourselves.

Two years ago we received a grant from the National Institute of Education to do an 18-month exploratory study of the learning processes of adults in rural Vermont. We were particularly interested in how adults with little formal education go about learning outside of formal education structures. The study consisted of three phases: (1) the replication of Allen Tough's Learning Projects Research where we randomly sampled 93 adults from a rural, largely "undereducated" population in order to compare this group with other studies which sampled primarily from urban and educated populations; (2) a "case study" phase which involved in-depth probing of the self-directed learning efforts of rural adults; and (3) a "dissemination of findings" phase.

The case studies were thus built upon a previously replicated interview study (the Tough replication), allowing us to establish a comparative data base before probing deeper dimensions of learning among 14 adults.

Another contextual clarification I wish to make is that our work was primarily "research" in orientation. We were not assessing a program or an institution; rather we were examining a state of affairs, (self-directed learning) in order to understand it as a phenomena and its implications for programs and institutions. As such, this kind of study resembles needs assessment efforts within broader evaluations schemes.

Allow me then to take you back "before the beginning" of this study when the purposes and the rationale were clarified and became guides for our decision-making.

> If I want to understand an individual human being, I must lay aside all scientific knowledge of the average man and discard all theories in order to adopt a completely new and unprejudiced attitude. (Carl Jung, **The Undiscovered Self**)[1]

Rational for a Qualitative Approach

For the case study phase we chose a qualitative or naturalist form of inquiry for several reasons. First, it was important to use a mode of inquiry that was consonant with the examination of a new domain of knowledge; that is, the natural processes used by little-educated adults in their self-directed learning efforts. Second, it was important to use a mode of inquiry that would be responsive to the participants and their environments; something that would allow for one-to-one contact which was secure, open, and facilitating. A third, and perhaps the foremost reason for selecting this approach was our commitment to the philosophical and theoretical roots of naturalistic inquiry. These roots could be called phenomenology, discovery, and expansionism (in contrast to positivism, verification, and reductionism). As stated by Bogdan and Taylor (1975),

> The phenomenologist is concerned with understanding human behavior from the actor's own frame of reference . . . The phenomenologist examines how the world is experienced. For him or her the important reality is what people imagine it to be.[2]

To use Hamilton's phase, "a deeper or more immediate appreciation of educational phenomena" was behind our motivation in choosing a form of inquiry which would allow the participants (rural adult learners) to describe their own realities of living and learning. Wolf and Timitz (1976-1977) say it this way:

> By design, naturalistic observations and ethnographic interviews, with their inherent responsiveness to immediate phenomena under investigation, extend far beyond what can be learned from employing standard protocols or standardized questions.[3]

Methodological Considerations

I'd now like to describe a few philosophical and methodological considerations which influenced the development of our case study design.

A key task was to be very clear about what we wanted to learn from the case studies. Using Tough's Learning Projects protocol, we had found that in some ways this sample of rural adults looked similar to other adult populations studied previously. Even though they averaged 10.3 years of education and the majority reported less than $10,000 per year in income, they averaged 4 learning projects per year with an average of 106 hours per learning effort. The question raised by these findings is "How do they do this and why?" Thus, a natural first step was to probe more deeply the learning processes and motivations embedded in the facts.

Another desire we had was to produce an end product which would not only expand the knowledge of self-directed learning of adults but also expand the horizons and understandings of "qualitative knowing" (Donald Campbell's term).

A third consideration revolved around the respondents. We expected to spend at least 14 hours with each person, so the number of respondents had to be reasonable. They also needed to be willing to enter into a time-consuming, basically unknown experience. It was important to have representatives in sex, age and educational background in order to do some comparative analysis. To get an adequate spread, we chose 14 individuals.

Above all, we intended to operationalize a philosophical commitment to participatory research. Treating each subject as a partner in the research process made sense only because of its consistency with the philosophical underpinnings of naturalistic inquiry, but also because of its practical utility. In order to get at people's learning experiences which weren't necessarily associated with formal structures, we needed to have a dialogue with respondents where meanings could be clarified and the accuracy of perceptions could be checked.

With these philosophical and operational considerations in mind, and because three of us were doing the research we made several procedural decisions. Some of these are listed below.

1. Each study will focus on a person as a single, unique unit.
2. The same interview protocols will be used with all co-investigators (as we came to call our respondents).
3. Interviews will be conducted in a conversational style, within the respondents' homes or other comfortable settings. Interviewers will attempt to establish rapport and maintain informality throughout the study.
4. Responses of co-investigators will be probed for clarity and depth of meaning.
5. Interviewers will document additional informal conversation before, during, and after the interviews.
6. Interviewers will document context-related data relative to the respondents, such as home environment, family interactions, and personal body language.
7. Responses to questions will be documented by interviewers through written notes, as well as audio tape (unless deemed inappropriate).
8. After each interview session, the interviewers will gather to discuss perceptions, difficulties, and the next steps during a sort of debriefing process.

Conceptual Framework

As you can see from the above guidelines, case study inquiry is rigorous in its attempts to pay attention to many data sources. This is a spatial and perceptual challenge to the researcher. Another challenge comes through the temporal dimension, as one tries to document over time the episodes which tell a story about the case.

In our study we not only documented the natural occurrences and language of our participants, but we also documented episodes which, in a sense, we created with them; that is, we intervened with some dialogical interviews and activities and recorded people's responses and reactions to them. Incidentally, I believe that any form of inquiry is an intervention in people's lives. What is important is to be clear about why one is doing so, as well as to communicate this to the people who are affected by the intervention. Wolf and Tymitz (1976-77) point out,

> This research mode is action - oriented and allows for theories to be generated, examined, and cross-validated through a variety of data collection and analytical procedures.[4]

Case Study Framework

Because we were focusing our inquiry on the content of self-directed learning, we needed some parameters or a conceptual framework that would help enlighten this phenomena. When we looked for a framework, there wasn't one to be found. This is because a coherent adult learning theory has yet to be developed. This dilemma is faced by many researchers and evaluators who are examining an innovative program or a developing phenomena.

In our case we decided to create a broad conceptual framework around the different knowledge bases that seemed relevant to adult learning such as developmental theory, cognitive theory, learning styles, consciousness theory, and futures. Without detailing all the investigations and decisions concerning these choices, let me explain what our basic framework became. Applying Lewin's (1941) field theory[5] of how contextual forces impact phenomena, we chose to look at such forces from a perspective of time, especially as these related to human development and cognition. We felt that a key to unlocking the thinking and learning processes of adults lay in examining present influences on their learning, influence from significant events in their past, as well as their anticipated or desired outcomes from a projected future. Thus, the general framework for the study was a chronological time progression of past, present, and future.

Case Study Questions/Dialogues

Within this framework, we focused on the parameters of boundaries of the case, using foreshadowing questions as guidelines. Looking at a person's past for indicators of his or her learning style, the following questions emerged.

1. What does a person's past reveal about his or her approach to learning?
2. How do people name and describe their own developmental phases?
3. What kind of learning do people associate with developmental phases?
4. How can stories related to coping with a particularly difficult time in one's life shed light on one's development of a learning style?

Indicators from the present which influence the individuals self-planned learning efforts and thinking styles were the following.

1. How does one plan a learning effort on one's own?
2. Where are resources found and how are they used?
3. How does one judge the value and/or effectiveness of such a learning effort?
4. What obstacles or barriers tend to limit a person's learning?
5. Can people examine their own thinking processes?
6. How do people see themselves as problem solvers? What can a cognitive profile reveal about this?
7. In addition to rational or systematic modes of thinking, do people utilize other modes to get answers to questions or problems? If so, what do they call these modes of thinking?

The final area of interest, the future, focused on a projection of learning interests and personal goals. The foreshadowing questions we used are listed below.

1. What unfulfilled hopes, dreams, and intentions do people hold?
2. What do people see themselves doing in the long-range future?
3. What learning needs are connected to long-range goals?
4. When asked to describe themselves to themselves how will people respond?

Case Study Activites and Illustrations

I'd like to walk you through our case study episodes by referring to Mr. Rock and to excerpts from other cases. First, just a word about what this case summary represents. Recalling the rules stated earlier, what you have is a descriptive summary of about 14 hours of dialogue and observation with one co-investigator. It does not include overt interpretations by the researcher or even impressions, feelings, or contextual clues perceived by the researcher. We decided to include all of these more personal impressions in a

separate and complementary document. The story of Mr. Rock that you have is a condensation of the participant's part in our dialogical interview sessions.

Before acquainting you with Mr. Rock, I'd like to read some excerpts from the more subjective, complementary document concerning the researcher's impresions of this man.

> The seasonal change from winter to spring was well underway as I pointed the car north for my initial visit with Mr. Rock. It was mid-April and already the days were growing warmer. The buds on the trees were swelling and early wild flowers dotted the landscape. Sounds of birds in their trek north puncuated the serenity of nature as she shed her winter's skin. As I traveled those first hundred miles, my mind wandered, asking what lay before me. Would I be received warmly? What kind of person would Mr. Rock be? How would he react to a person affiliated with the University? Would I be seen as a villain or a friend? Questions such as these occupied my mind as I approached the promised land known as the Northeast Kingdom. My questions and concerns were soon put to rest as I met and talked with Mr. Rock.
>
> I arrived promptly for my initial visit at 10 A.M. It was a Friday, brisk and overcast. As I unfolded myself from my small foreign car, I scanned the yard, looking for signs of what kind of person Mr. Rock would be. There were few telltale signs. I cautiously approached the back door, taking note of the old house with new clapboards. It was on the small side - more a cottage than a house - and had clear Victorian lines. The house reminded me of the "Ginger Bread" house in Hanzel and Gretel. For a moment, my mind wandered, thinking what a neat little place it would be in the Land of Oz.
>
> I rang the doorbell and after a few seconds was greeted by a short but heavy-set man. He identified himself as Mr. Rock and asked if I was the person from the University. I said I was and gave my name. We exchanged pleasantries and after several moments of sizing each other up, I was invited in. We passed through a cluttered entryway to the kitchen. I stopped to scan the room, and noticed telltale signs of a bachelor (at least someone who lived alone). There were dishes and folded clothes about and the kitchen table was occupied by a television in disrepair. "Obviously," I thought to myself, "few women would put with such ordered clutter." We then passed into the living room where I was offered a comfortable chair. As I sat down, I noticed the room filled with numerous tools and gadgets. In one corner lay several radios and in another, a pile of books, magazines, and monographs. The room was arranged comfortably with the television on and the police scanner blinking

madly. I later learned that these items served a companion role, helping to pass the time away. As Mr. Rock related, "You know, it may sound crazy but that damn thing (T.V.) is a blessing in disguise. I'm pretty busy with my many projects and it's good to have it on in the background. It's like having company when you really don't!"

Mr. Rock is introduced in the first paragraph of the case report to provide some historical and demographic orientation. The next several paragraphs describe his responses to our first session with him which included an exercise called "Milestones." This was a tool we adapted from one that Art Chickering at the University of Tennessee had used with professional educators. People were asked to recall all the significant events in their lives since leaving school. These were then placed on a time-line which the people then divided into time periods or clusters and named as "the time in my life called _____." Following this, a number of other questions were asked concerning the important people, learning, and resources utilized in these "time clusters."

The names given by the participants to these developmental phases were rich, decriptive, and seemingly untainted by existing developmental theory. Note Mr. Rock's periods: "Getting an Education," "Work and Community Service," "Personal/Social/Family Time," "Community Activities - Very Feverish," and "Health Concerns: Dealing with Illness."

We found in the others, as well, a rich array of titles to the pivotal times in their lives. Among women there was a clear pattern in their naming of the early marriage and child-raising years. Examples of these were "Hardest Time," "Adjustment Time." "Scared Stiff," "Quite Disillusioned with Marriage," "Routine," "Troubled Times."

Continuing with Mr. Rock on page 16, the second paragraph describes his responses to a deliberate probe within the Milestone experience which was called a "coping with conflict" question. "Think back to a time that was particularly difficult in your life and tell us what happened." Responses to this question indicated another aspect of a person's life concerning how he or she dealt with conflict or trauma. We wanted to see if there were some learning dimensions to this part of life, as well as indicators of a person's coping skills. Near the bottom of the page, Mr. Rock admits to coping with his illness through the process.

At the bottom of page 16, is an account of Mr. Rock's descriptions of himself which were given in response to our question "Describe yourself to yourself." We actually asked this near the end of the 14 hours, but it is included here in the write-up. Similar to Mr. Rock, most persons described themselves in very modest terms, pointing out weaknesses, as well as strengths. One theme running through the men's descriptions was the need to control one's temper. A developmental theorist working with us pointed out that the control of anger could be seen as an obstacle to growth and learning since it makes one hesitant in developing open relationships.

Continuing on page 17 is a detailing of the process of self-directed learning projects. To solicit these responses, we used a set of questions developed by Roger Hiemstra from Syracuse University, which asked a person to recall all

the planning and decision-making involved in a learning effort that was self-directed. This exercise, called "Learning Style," triggered quite amazing responses from our rural adults. As was true for Mr. Rock who used multiple resources for learning and accomplishing his project, many others indicated a sophistication about locating resources and applying a rational, step-by-step process. Verifying their efforts, they often showed us the product of their learning, proudly demonstrating their successes. I'd like to present an excerpt from a 25-year-old woman who described what she discovered about herself in a learning project involving a tax course.

The most helpful person during this time, she said, laughing,

> was myself! I asked people about different things and they'd never really say too much - like all my brothers and sisters, or when I was taking the course. My mother and father thought it was stupid of me. "You've got a family, stay home with your family!" and I said "to heck with you, I'm going to go out and do things for myself for a change!" My husband was always there. He thought is was good for me to take what I did, but it wasn't body - it — it was me, I wanted to do it and I did it!

At one point we asked people to think about how they think, how they go about solving problems, gaining insights, etc. To make such a reflective process more concrete, we developed a series of questions called "Modes of Thinking," which enabled people to locate their thinking process in spatial and temporal terms; for example, where are you when you find yourself thinking and what time of day or night? Then we asked them to give some examples of problem-solving experiences.

At the top of page 18, in the first paragraph, Mr. Rock describes a logical step-by-step process which begins with an image in his mind. When we examined all the studies for possible themes, this process of visualizing an end result was very prominent. A man with only five years of schooling said it this way: "I usually have to see it before I can do anything." A women with eight years of schooling looks at pictures in magazines or else constructs small models of her craft's goals before she starts to work on them. A 53-year-old farmer with seven years of education described his thinking process as "dreaming" about the way some goal could look, trying out several variations on the mental image, and beginning the project only when "the picture is clear."

When queried about whether they ever got answers to questions or problems in nonrational ways, everyone had a story to tell. We asked them to name this type of thinking and we received titles like "back-burner," "spontaneous," "psychic" (as Mr. Rock describes it), "pass'age" (French for passage; for example, "something comes through a passage and it passes through the head and keeps going").

Included in this framework for exploring people's thinking styles were a series of cognitive processing exercises designed by a colleague of mine, Dr. Charles Letteri. The exercises were developed to measure information processing skills over seven different dimensions such as Global/Analytical;

Simple/Complex; and Tolerance/Nontolerance for Ambiguity. The results of this data are written up in separate reports which describe the cognitive profiles of each person. For those of you who may be interested, these profiles did not differ from those sampled from educated and professional adults, suggesting that the number of years of formal education is not a significant variable in the development of information processing skills.

Finally, our study focused on the realm of the future when we asked people to project themselves 10 to 15 years from now, doing what they've always wanted to do. On page 18, Mr. Rock describes his future goals. The theme of travel was found in almost every response. Because of this and the connections people made between travel and learning, for example, "seeing industry in action," other cultures, different geographical formations, several of our consultants suggested that travel may also be a metaphor for the need to transcend their isolated and sometimes limiting environments. sometimes limiting environments.

On the last page, Mr. Rock states another common theme that these hardy, rural survivors said over and over again, though each in his or her own way. He reflects about how he copes with his illness and pain and then says, "Life is learning and learning is life. They go hand-in-hand."

After we completed the case summaries, we returned to each of our co-investigators and had them read and check the accuracy of the accounts. We also asked them to reflect on the case study experience itself, and, again, Mr. Rock's comments were typical.

> I'm quite surprised with the things we have talked about. Quite frankly, I didn't think I had much to offer to a study like this. I'm surprised, I guess, it helped me see a side of me that I hadn't seen before. The one satisfaction I would get is seeing others benefit from the study.

Mrs. Field said it this way: "I liked it. We talked over lots of stuff I used to take for granted."

To summarize this methodological description, the tools we used varied in style, as well as content, and fit into our overall case study design. They enabled us to examine the individuals' past experiences, their present learning processes, and their future expectations in order to provide a more holistic picture of the self-directed learning of adults.

Case Study Reflections

We learned a great deal from these people about how they viewed learning and problem-solving, but we learned a great deal more than we had set out to examine. This element of the unexpected and the unfolding of surprises are what I think make case study work so rewarding. In spite of all of its pitfalls and shortcomings, case study inquiry can become, at its best, a means of

illumination (Parlett and Hamilton's term)[7]. The subtleties and complexities of human experience can never be fully comprehended, thank heavens. But to expect the unexpected in case study encounters would be my recommendation to erstwhile evaluators. The challenge in this work is to be open to seeing and hearing beyond one's professional frame of reference.

I'd like to conclude with some examples of the surprises we encountered throughout our intense experience in the Northeast Kingdom of Vermont. An outstanding surprise was that we were warmly received and patiently treated as we tried to strip away our university trappings of language and expectations. These people delayed their work, baked goodies, put on clean shirts, invited us to drop in anytime, and generally came to trust us as friends and even confidantes.

With each visit we could sence a deeper cementing of our relationships, and we can recall in each case times when the roles between researcher and subject evaporated. It was the time when Mrs. French confided that she almost lost her husband to another woman and described how she won him back through a week of seductive planning. It was when Mr. Ambrose, who had begun farming at age 50 and was doing very well, admitted that he was a dreamer and would give anything to go off hunting and exploring wild game in the wilderness instead of doing chores. Mrs. Field, during our study, found the mother she had been searching for. During this same period, she also tried to accept her husband's mistress, who came to live in her household where she gave birth to her husband's child. Each person had some private sorrow to share. But above all, we learned about the resilience and ongoing strength of these survivors in the Northeast Kingdom. We were forced to change our preconceptions about what rural folks are like, what they think about, how they reflect, and what their dreams tell them. Hearing statements of values like "Knowledge is good common sense," "Thinking good thoughts always comes back to you," and "If you're not learning, you're dead!" gave us glimpses of the undergirding optimism that propels these people.

The crack in the wall that you thought divided your world from their world widens when you see yourself reflected in their words, images and memories. I now realize that I, too, "tuck things away in the back of my mind" and allow them to surface when the "time is right." The concept of motivation takes on a new twist by this notion of readiness for "a teachable moment" (as one of our consultants coined it). I also now understand that my learning or creative efforts begin with a visualization, "almost like a meditation," as Mr. Ambrose said when he described how he let his mind conjure up images while he sat on his tractor plowing his rocky fields.

Another part of our research team was twelve consultants, or co-interpretors whom we utilized throughout the study. This group grappled with these cases over two weekend retreat sessions with us. Attempting to hurdle the academic obstacles of different language constructs among themselves, as well as between them and the case respondents, these consultants came to appreciate the quality and competence of the rural adults. In fact, several felt it might be important to design protective policies to safeguard the autonomy and dignity of self-directed learners. Others wanted to facilitatate this learning with the community support-systems and

resources. I believe that all of us felt, as Bob Stake so aptly described, the "fundamental isolation" between these people and the educational and social service agencies which make policies and develop programs that are so often removed from an intimate understanding of who these people really are.[8]

If there is any "naturalistic generalization" that emerges from this study, I believe it has something to do with finding ways to gather and mirror a more holistic portrayal of people and their actions. In our study, we created only a few ripples of understanding and yet came away moved and changed by the experience. But there's a whole mountain range under the surface of the water. We are again reminded, as David Hamilton said earlier, that "it is not our world that fails to live up to our science, it is our science that fails to live up to our world."

When I asked Mr. Ambrose, the man who started farming at age 50, how he felt about the land, he said,

> Well, I feel like I want to know it more. I feel close to it. I mean I'd like to see it do better and I would say that makes you feel close to it.

A standard for case study inquiry?

Finally, a last word from our centerfold, Mr. Rock. When my colleague Burt Sisco further probed the question of what he thought about the project, Mr. Rock mused for a minute and replied,

> I think it's rather unique because I pretty much took for granted what I am and what I do and I really had no idea that there was any particular significance in the things I do...

And as an afterthought he added,

> I think this makes a lot more sense than writing a thesis on the mating habits of mosquitoes.

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CASE STUDY METHODOLOGY:
An Epistemological Advocacy

by Robert E. Stake

Earlier we got acquainted with Mr. Rock, who, as Connie said, is a survivor of dropping out of high school, a survivor of World War II, a survivor of a brief marriage, of a heart attack, and of a half-century of poverty and isolation. He described himself as successfully coping with life and as continuing to learn.

That case study of one retired Vermont civil servant told us a bit about the human condition, a smattering about adult learning that we did not know before. But mostly, reading it and thinking about it awakened knowledge we already had. It may have been useful in that we would not have recalled that knowledge without the reminder.

Had we read the full set of Connie's case studies, we might generalize a bit more about the rural adult learners of Vermont. Some of the generalizations, however, would be based on cases and convictions already stored somewhere among our personal recollections. One accomplishment of case studies is to awaken and to refine the formal generalizations that we already have. My purpose is to talk about case study knowledge as unique knowledge and especially as raw data for the reader's own experiential, naturalistic generalizations, that is, the tacit and ineffable knowledge emphasized by Polanyi.

The context of our concern at this conference is "program evaluation." We can consider how the study of individual learners aids the understanding of a program. Or we can consider the program itself as the case. Then the evaluation is done by exploring the program, its history, its habitat, its major enterprises, and its extension to where the program gets involved in affairs that it did not intend to. This is the kind of evaluation case study that I usually am involved in, a study in which the program is the case.

I do not want today to overlook arguments for the use of structured case materials on individual learners, individual teachers, or individual schools. That is, cases which might be aggregated, as were ours in the ***Case Studies of Science Education*** (one of which was completed, as we know, by our colleague and host, Wayne Welch)

When Wayne was first contemplating this Second Evaulation Conference I volunteered to make the argument against the use of case studies in evaluation designs. He graciously declined, feeling certain, I believe, that I might not adequately understand the violation to sound research thinking posed by naturalistic case studies. And if I did understand it, I might be little inclined to broadcast it. That may be. It also may be that all four of us speaking today are incapable of perceiving the damage inflicted on research beyond its membership in some aggregate and beyond its contribution to some generalization about relationships among variables. For although David, Connie, Jim and I each point to the hazards and unrelenting costs of naturalistic fieldwork, not one of us is a true enemy of the case study.

Thus it falls on me to try to make an alluring plea for the inclusion of case studies in the evaluation research arsenal. There are six parts to my paper, but I will emphasize only a single claim. It will not be the claim that David Hamilton hints at in his paper, that case studies may be more fair or otherwise more consonant with esteemed humanistic values. Nor will it be that case studies are easier to understand. Rather, I would like to emphasize that for some issues and workings of a program, a naturalistic case study provides more valid recollections.

It is to be an epistemological argument. If case studies provide different and better knowledge (by providing more valid portrayals, better bases for personal understanding of what is going on, and solid grounds for considering action), the case study may win a secure spot among the methods of evaluators. I will try to show that case knowledge is different from that of correlation surveys, document reviews, and experimental research because it is more intimately related to its context and more personally relevant to those having existing experience with such a program. The argument will depend in part on the perceived desirability of having readers of evaluation reports form their own judgments about the quality of the program.

The Knowledge of Experience

As I see it, the most important thing about naturalistic case studies is that, when properly done, they extend personal experience and refine experiential knowledge. It is that kind of knowledge, more than formal generalizations, that forms the primary basis for the personal striving of all people, be they children, professors, or retired postal clerks.

The business of education is both rational and intuitive. Along with many research methods, case studies can contribute to the rational. That is, they can help us arrive at formal statements of generalizations. For example, Mr. Rock described himself as systematic and analytic. He said, "I like the rational way of thinking more. It saves you a lot of steps, resulting in fewer mistakes." From this we might reinforce a generalization that rural adult learners comprehend such terms as "rational" and "analytic," ones which we might want to use in introducing a new extension program. Many times such formal generalizations will actually be quoted by case study field workers.

But case studies can also help upgrade the intuitive processes. The vernacular of case reports usually fits well with the conceptualization of ordinary experience. It is not common for research to be asked for contributions to the intuitive. In his early writing, Don Campbell favored the positivistic educational evaluator, the one inclined to insist on random sampling, standardized instruments, and control groups. He also encouraged the exorcism of folk knowledge and intuitive action in professional work. I protest that it has been the intuitive not the rational that helped man survive when the stronger beasts were his adversaries and the most elusive were

his quarries. The fact that our jungle has changed does not lessen the importance of the intuitive. Certainly there are situations in which it is desirable to have program administrators, teachers, and taxpayers act more rationally and less intuitively; but as long as people are relying heavily on the intuitive, evaluation services should try to accommodate it. It is not the evaluator's responsibility to make education a more rational pursuit, especially without better evidence that rationality helps rather than hurts. Each evaluator should be prepared to work with whatever cognitive functions are presently governing an educational program.

As surely as there is a prominence of intuitive powers among all who participate in education, there is a need for research that addresses personal conviction that is generated in part from personal experience, direct and vicarious. It should be an empirical matter, as well as an intuitive one, to consider whether or not the case study reports offering portrayals and vicarious experiences contribute to valid understandings of the workings, costs, and impacts of a program.

It is fascinating. Here we are gathered together to talk about something as earthy, political, and technical as the evaluation of educational programs, and we find ourselves stretching our minds to the limit to understand what is the essential knowledge by which people decide to make one judgment rather than another. And just around the corner lurk ethical arguments about equity, equal opportunity, due process; and just a bit further is the question "what is truth?" Perhaps it was the gin and tonic before lunch, but this whole heady business makes my eyes water. Let's see if I can put things straight in this unidimensional argument I am trying to make.

Thick Data and Parsimony

Let us say that we are interested in Mr. Rock because we are trying to evaluate the quality of informal information services available to adult learners in rural Vermont, as some of Connie's audiences were. We want to decide such things as how much to invest in offering information to first-wave innovation leaders in the community (whose example and advice others will follow), versus how much proportionately to invest in giving direct information to ordinary users such as Mr. Rock. Or we want to know whether to purchase more programs from out-of-state producers or to produce our own: to what extent are listeners influenced by attention given to Vermont contexts?

There are many aspects to attend to, but we are persuaded that we need to know more about the ordinary learning styles of Mr. Rock and his fellow citizens. We do not suppose that they are going to learn differently from the way they had been learning, even though in advanced age and infirmity they may learn some very different things from what they had before. Of course, we have some doubts that Mr. Rock can give a fully insightful and dispassionate account of his own learning, but we also believe that he understands

himself in ways that others do not and that one important way of finding out more is to ask him. We are also convinced that no one else is quite like Mr. Rock and that it makes little sense to think of him as typical of some group. But what we do is use the information about Mr. Rock to recall and enrich the understandings we already have. Mr. Rock talks about psychic powers, surprising us with the relevation, and we think something we would not otherwise have thought. That is right, there are some adult learners who want to avoid the presentation of ideas in a supernatural, metaphysical way. They want it "cut and dried," not subjective, not personalistic. Now let our readers think about their present program to decide whether they might be obstructing the information Mr. Rock could use by presenting it in a too homey, authoritarian, or capricious manner.

Now, of course, it would be said that if we were really ready to evaluate we would have recognized in the design phase that presentations should be rated as to how homey, authoritarian, or capricious they are. And we should. But our checklists never come close to covering the number of relevant characteristics that we scan and judge as connoisseurs or critics in our own ways, such as when evaluating luncheon menus, student performances in class, or the performance of the state's extension program. As critics we unconsciously use a vast array of criteria.

But the issue of addressing enough relevant variables understates the problem. When we evaluators think of how homey, authoritarian, or capricious our information systems are, we direct our attention sharply to those variables, paring away the interactions so that we have as clean a judgment as possible. But for Mr. Rock, the attractiveness and utility of information may be situational. He may respond favorably to electronics information that is presented in an explanatory manner, cut and dried, nothing fancy. But he may respond positively to income tax information only if there is a recognition of the personal difficulty faced by a man in his circumstances. He may treat it all differently now that he is living alone.

One of the problems of the case study report is that it dismays readers with the fluidity and complexity of interactions. Yes, Mr. Rock is a complicated man, as are all of the other adult learners. We cannot pin down what really is going to be useful to Mr. Rock, even with an expensive case study. And we know that the people down the road are going to be different, though just as complex. And so we glimpse the "truth" that David Hamilton mentioned, a truth that doesn't fit within our methods. Education is a complicated business. Pedagogy is not the sum of the generalizations from the educational psychology courses. It is the constant weathering of generalizations by experience. And this experience is the force it is because it is so unendingly connected to the learning milieu, as stressed by David Hamilton and Malcolm Parlett in their illuminative evaluation paper ten years ago.

Notice then this big alternative. Some educationists and evaluators say that the determinants of learning are relatively few and robust; and that if we provide those critical conditions, desired learning will occur. Those particular conditions may be difficult to supervise and to measure, but we can look at things that correlate with them. The conditions of learning are such a

positive manifold that if we have good measures of just a few variables we will have a solid basis for making an evaluation of the program.

But some others say that the vital conditions of learning are innumerable. You can learn in as many ways as you can get fat. And there are as many diets that work. And lots of ways to keep diets from working. It is not a compensatory system in which a dynamic script reader can make up for the poor television signal received in the far corner of the state. Gardeners will not appreciate good planting guidelines if the county agent is a klutz. To make a program work you have to make many different parts work, and to evaluate a program you need to see how the parts are working together within different contexts.

Case studies do not solve the problem of endless vulnerabilities, but they do help developers, sponsors, and learners keep in touch with the reality of the vulnerability of programming an adult learning operation.

The Uniqueness of Case Knowledge

How is knowledge from case studies different from other research knowledge? I have already said that case study knowledge is likely to be experiential knowledge rather than formalistic knowledge. A reader of case studies adds to the rememberances of "being there" as much as to the repository of statements about what "is" there. Those deposits in memory are different, I believe, in four ways. Case study knowledge is (1) more concrete, (2) more contextual, (3) more developed by reader interpretation, and (4) based more on reference populations that are defined by the reader's previous experience. Let us address these one at a time.

First, the memory of experience is loaded with sensory data and not so loaded with abstraction. There is much emphasis on time, place, and people because our sensory awareness is so acute. There is less emphasis on constructs such as "social isolation" or "intellectual curiosity." These variables may be good titles for a package of memories, but many concrete details are remembered which are not subsumed by key constructs.

I should add that many case study writers choose to emphasize abstract constructs. From their publications, readers acquire knowledge more similar to that from correlational and historical analyses. The case studies I prefer contain a large provision of uninterpreted observation and testimony.

Second, the memory of experience is context-bound, whereas the memory of formal generalization is deliberately oriented to knowledge independent of context. When Mr. Rock speaks about his learning style we are aware that even while in the U.S. Postal Service he was isolated from the world of print, that his interests have been technical rather than philosophical, that his physical frailty has been on his mind, and so on. Whether or not these contextual matters are important requires pondering, but the point here is that the case study description of this rural adult learner provides knowledge framed by his social and personal environments.

Third, the memory of experience, rich in raw data, invites readers to form their own generalizations. Not only does the case study deliver some of Mr. Rock's generalizations, and some of Connie Leean's generalizations, but the delivery quickly becomes intertwined with generalizations that the reader makes as the new data are added to old. I previously have referred to them as "naturalistic generalizations"; that is, generalizations derived primarily from experience rather than from logical processing of the relationships among abstract constructs. Many naturalistic generalizations are formed and reapplied so immediately that I consider them to be a part of the knowledge produced by the case studies rather than something processed subsequently.

And fourth, these naturalistic generalizations trace to a different population base than the one presented; that is, to the research interpretations of other studies. Whenever we generalize we are at least inferring some population. We are thinking that the generalization holds, to some extent, for all cases within some explicit or implicit population.

When the generalizations are drawn by the reader, they belong to cases and populations with which the reader has been acquainted. The researcher's population, on the other hand, may be a formal population from which the observed data are sampled or an informal population drawing partly on cases the researcher has previously known. Thus the knowledge from case study research is different in that at least some of the reference populations (whether articulated or not) are determined by the reader.

To summarize, the knowledge from case studies is different in that it is more concrete, more contextual, more subject to reader interpretation, and based more on reference populations determined by the reader. These differences are a matter of degree, but the shift in concreteness, contextuality, complexity, and reference population is often so large that it appears to call for a different epistemological classification.

The Worth of Case Knowledge

How may case knowledge be worth more than knowledge from other research? The fact that it is often more concrete and less abstract does not automatically make it more valuable. There will be some audiences and some occasions, of course, for which experiential observations will be more valued; but there will be others where a less personal, more sophisticated conceptualization will be preferred. It depends on the audience and on the purpose.

The matter is further complicated by the fact that terminology which is abstract and artificial for one reader will be real and experiential for another. All of our language and all of our memories are mere representations of what is actually experienced. But some terms are more abstract, more removed from personal experience.

When we work closely with an abstraction in empirical research we come to interchange experiential recollection with more abstract language. We talk to Mr. Rock and we think "tinkerer." We hear him tell about his way of learning and we think "rational." Encountering similar cases over and over, we find that the formalism becomes closely tied to experience.

Perhaps when Albert Einstein saw his housekeeper he thought "mass." When he said "energy" he may have felt the sun stirring the molecules of his body. I don't know. But I do know that one reader familiar with an abstract term finds it suitably concrete, whereas another reader finds it uncomfortably abstract.

In an evaluation report some readers find concrete descriptions useful because they correspond to their own literary conceptualizations. Readers who are more linguistically sophisticated find abstract constructs concrete and ofter more useful. Both audiences may appreciate the inclusiveness and power of the abstract term, but some will not be able to attract personal meaning to it.

Of course, any reader may recognize the political force of highly abstract language. When the purpose of evaluation is advocacy or legitimation, the abstract, even the more mystifying, may be preferred. Case studies can contain both abstract and concrete representations. Neither is the right choice all the time.

The second uniqueness I claimed for case knowledge was its contextuality. Here again we could say that different readers prefer one language over another, but we have something more to consider.

Earlier David Hamilton wrote, "our science fails to live up to our world." He did not mean just that we do not know what causes what. We also do not know whether we in schools live in a simple world magnificently obscured to our weak vision or in a complex world where multitudes of causes take turns evoking success or failure.

Many educational researchers dream of a simple explanation for education, something perhaps like $E = mc^2$, forgetting that a physicist has little talent for predicting the flight of a dandelion seed. The puff ball's energies are beyond its mass, and its transport depends little on its energy.

The dandelion seed is not important to the physicist, but the plight of a single lonely bachelor is important to the adult educator, not necessarily as a matter of humanity, but because the bachelor's learning is borne by the circumstances of his life as much as the seed is borne by the wind.

Lee Cronbach noted that it is fourth- or fifth-order interactions, those beyond our analysis, perhaps interactions with a factor we failed to measure, that defy our explanations of educational achievement. Using the variables we have dreamed up during these first 100 years, we find that it seems preferable to behave as if the world of teaching and learning is simple.

If the world is complex then, even though our explanations may have little predictive power, may of our descriptions should be complex. Not only should we put lots of variables in the checklist, but we should keep the contingencies among individual data outside the computer where the reader can pursue them.

Mr. Rock felt an obligation to his home, his state, his country. He followed his father's avocation, electronics. He considered his best assets "being kind and giving to others." Can we understand his interest in getting a GED without understanding his loyalty and devotion?

The third unique aspect of case study knowledge emphasized a clear and important role for the reader in the making of that knowledge. The reader, as well as the researcher, adds new to old, instantly giving meaning based on previous experience and abiding conviction. Without knowing it, the reader is the hero of this inquiry, and what is heroic is the making of something relevant out of what is distant and caught up in its own parochialism.

But here open the floodgates of subjectivity and bias. "Let the readers judge, make of it what they will." Given wide-ranging observations, cumulus raw data, perhaps not interpreted and free of recommendations, readers are almost invited to fit things to their own special interests.

The special interests of the researcher we can announce explicitly in biographical footnotes and implicity in the treatment of subjects. The inaccuracies of ethnographers we can diminish through triangulation. But the subjectivity of the reader is largely beyond our control.

And so it should be. Be reminded of Hamilton's critical dimension among methods of inquiry, with efficiency on the one hand and justice on the other. Something has been wrong with evaluation studies more than their inability to measure impact and to isolate critical ingredients. They poorly serve different value positions. Different audiences, of course, are not treated equally. Michael Scriven invented the goal-free approach to dissociate us from program advocates. Urging more concern for consumers, he opposed Lee Cronbach's early orientation to curriculum developers. Marcia Guttentag created the term "stakeholder" to help the evaluator answer the question "Whose side are you on?" It has been no secret that each evaluation approach favors certain points of view more than others.

A partial alternative to asking or forcing the evaluator to be more equitable is to give leverage to the reader. The case study that provides portrayals capable of different interpretations, hewing to what is commonly observed and relevant to an array of concerns, may do more for justice than it loses in efficiency. I doubt if we will ever know.

The fourth unique characteristic is that of population relativity. Of what value is it to shift from researcher-determined bases for generalization to those determined by readers? This I think is a fundamental shift in knowledge base and extremely important for service-oriented, decision-oriented research such as program evaluation.

As an aside, let me remark that I frequently hear pleas to present positive arguments for case studies and to not begrudge the more quantitative methods their century in the sun. I cannot help but be negative about the proposition David Hamilton used to identify the scientific method, that "what is good for society is good for the individual." So I will be negative for a moment.

We have been too slow to admit that what is good for educational research may not always be good for education. The opportunity to use population statistics, with firm rationales and elegant probability statements, has been seized with the optimistic contentions that "at least it is

a step in the right direction" and "the individual effects are merely refinements on the main effects." It was expedient, rational, and reputation-building for us educational researchers to presume that our primary aim was grand generalization. As did R.A. Fisher and Carl Pearson in the late 1800's, Don Campbell and Julian Stanley borrowed the statistician's idea of a common population of cases, real or hypothetical, about which we would forge the general laws of teaching and learning.

From this grand population each educator's business would be considered a sample. We researchers were to be very careful in drawing our samples for research purposes, but users of research were to blithely assume, without sampling theory or other caution, that their samples of teachers or learners could be considered members of that population.

In his most recent book, ***Designing Educational Evaluation***, Lee Cronbach argues that most program evaluations are case studies and that naturalistic reporting needs to accompany statistical analysis; but he does not yield on the idea that the findings are mediated by the idea of a common population. Lee is retired now, but still greatly at work. I hope he has one more book to write, a book that will recognize that unlike conclusion-based research, decision-based or action research can be disciplined around the idea of direct extrapolation from case study descriptions to the reader's case at hand.

Readers have enormous power, though it is not infallible, to recognize what is relevant and what is irrelevant to their own circumstances. For those matters that are greatly influenced by context, the responsibility of a case study researcher is to provide the contingency and contextual data that enhance and constrain those intuitive powers. The population of cases most relevant to decision-oriented research and program evaluation is the population that the reader already has experience with. Except in the most politicized of situations, understanding and action will ultimately be based more on personal conviction than on formal research findings.

This is the way it is. Maybe the world should be more rational, more committed to the knowledge and preservation of the society as a whole, but individuals care much more about their own. The knowledge most useful to them is about their own kind of people, their own kind of program. And given opportunity, they can use the evaluation of a distant program to better understand their own.

In this paper I have claimed that the most important reason for using case study methods in program evaluation is an epistemological one: the naturalistic case study gives different information which is sometimes more suited to the purpose of the study.

I was reluctant to claim that this knowledge is qualitatively different; but with their great concreteness, contextuality, and reliance on reader generalization and population determination, case studies can make unique and valuable contributions.

Let me end with those last words of Mr. Rock:

> I'm quite surprised with the things we have talked about. Quite frankly, I didn't think I have much to offer to a study like this. I'm surprised, I guess. It helped me to see a side of me that I hadn't seen before. The one satisfaction I would get is seeing others benefit from the study.

CASE STUDY METHODOLOGY: A CRITIQUE

by James R. Sanders

I should begin by saying that my purpose here, as well as my perspective on case study methodology, is not to take an adversary position as one would expect following Stake's advocacy title and given the title assigned to me for this presentation. I happen to agree with Millman and Gowin when they say that a critique ". . . is a process of analysis, of breaking down and taking apart. . . " where "the critic brings another pair of eyes, another mind, another point of view. . ." (Millman and Gowin, 1974, p. 1). I also agree with them that a critique depends heavily on human judgment. What I have chosen to discuss and how I have chosen to array certain concepts are functions of my knowledge and experiences with case study methodology. This paper might better be entitled "Case Study Methodology: A Perspective."

You need to consider my history as you judge the points that I have to make. I am an evaluation practitioner. I have been conducting evaluations for almost fifteen years. I am a student of evaluation and look for opportunities to listen to the ideas of persons like Bob Stake, Wayne Welch, and others who never fail to offer provocative fare. I have changed my views over the years as I have experienced problems with evaluation; I have solved some problems myself, and I have listened to others as they have advanced their own conceptual views. The process of assimilation is still continuing.

Since the focus of this conference is on the use of case study methods in educational evaluations, I will start with a conceptualization of evaluation and then turn to the question of how case study methods fit within this framework. I will conclude by analyzing prominent characteristics of the case study method that may be considered strengths or weaknesses, depending on the circumstances surrounding an evaluation.

A Conceptualization of Evaluation

Twelve years ago the National Academy of Education published a document entitled *Research for tomorrow's schools. Disciplined inquiry for education*, edited by Lee Cronbach and Patrick Suppes. That document and earlier writings by John Dewey (1933) on reflective thinking have influenced more than any other writings, my conception of what a philosophical framework for evaluation should be. In our text on evaluation, (Worthen and Sanders, 1973) we quoted Cronbach and Suppes as follows:

> There has been agreement, both within and without the ranks of educators, that systematic investigation has much to offer. Indeed, there is agreement that massive, lasting changes in education

cannot safely be made except on the basis of deep objective inquiry (Cronbach and Suppes, 1969, p.12).

> Disciplined inquiry has a quality that distinguishes it from other sources of opinion and belief. The disciplined inquiry is conducted and reported in such a way that the argument can be painstakingly examined. The report does not depend for its appeal on the eloquence of the writer or on any surface plausibility. The argument is not justified by anecdotes or casually assembled fragments of evidence. Scholars in each field have developed traditional questions that serve as touchstones to separate sound argument from incomplete or questionable argument. Among other things, the mathematician asks about axioms, the historian about the authenticity of documents, the experimental scientist about verifiability of observations. Whatever the character of a study, if it is disciplined the investigator has anticipated the traditional questions that are pertinent. He institutes control at each step of information collection and reasoning to avoid the sources of error to which these questions refer. If the errors cannot be eliminated, he takes them into account by discussing the margin for error in his conclusions. Thus the report of a disciplined inquiry has a texture that displays the raw materials entering the argument and the logical processes by which they were compressed and rearranged to make the conclusion credible...
>
> Disciplined inquiry does not necessarily follow well-established formal procedures. Some of the most excellent inquiry is free-ranging and speculative in its initial stages. trying what might seem to be bizarre combinations of ideas and procedures, or restlessly casting about for ideas. . . . But. . . fundamental to disciplined inquiry is its central attitude, which places a premium on objectivity and evidential test (Cronbach and Suppes, 1969, pp. 15-16, 18).

Although my conception of disciplined inquiry differs from the original in such areas as the way in which objectivity is defined, I find that a broadened definition of disciplined inquiry is one that can comfortably house both science and other forms of scholarly investigation. Research, evaluation, and other forms of inquiry fit within the revised domain of disciplined inquiry.

Dewey's conception of reflective thinking, where thinking originates with an issue or state of doubt and moves into an act of searching, hunting, and inquiring to find material that will clarify the issue or reduce the doubt, is entirely consistent with disciplined inquiry. In Dewey's terms, given a difficulty, the next step is to form a tentative plan or project to account for it; that is, to entertain some theory (or multiple theories), to develop some hypotheses (in the broad sense of plausible conjectures that are open to test) that will focus on the peculiarities in the issue or doubt, and then to openly investigate so as to help shed light on the issue or doubt. Jumping to

conclusions without searching is not reflective thinking. The reflective thinker must be open to all sides of the issue, critical and painstaking, and willing to examine the test. There are the characteristics of reflective thinking that I have borrowed for a definition of disciplined inquiry.

The key elements of evaluation as disciplined inquiry and reflective thinking, as I see it, are purposive and systematic search; explicitness in reporting descriptive information, criteria on which judgments are based, and the logic of the inquiry process; openness to criticism and public display, and painstaking care in examining, confirming, and reviewing the arguments and bases on which judgments are made. The end result of the inquiry process in evaluation, consistent with the definition of evaluation provided by Stufflebeam and Webster (1980), contains value statements that shed light on the issue or doubt that existed originally. Although there are differences in methodology among scientific research, evaluation, logical analyses, and other forms of disciplined inquiry, the key elements I have just listed are held in common across these processes. Hence, I continue to view evaluation as a form of disciplined inquiry, as I use the term.

Case Study Methodology in Education Evaluation

Case studies may be defined generically as descriptive studies of segments of a particular case. The case may be a person, a classroom, a school system, a project, or other particular entities. The case will have boundaries set at least by time, actors and setting. Frequently there will be a particular issue or dimension of the case being investigated.

Case study methodology involves the study of techniques and procedures used in conducting case studies. There are no limits to the techniques that the case study investigator may use if they serve the purpose of systematically examining some segment of a particular case. The same is true regarding the procedures of case study inquiry. Case studies as disciplined inquiry must contain the elements of disciplined inquiry that I described earlier. Case studies as a method in educational evaluation must contribute information that will be useful for making value statements about some issue or object. Experiments, surveys, structured quantitative observation, and cost analyses may also be used by the educational evaluator to obtain needed information.

Using one approach to obtain information should not rule out using other approaches. Often case study findings will complement the findings of other inquiry approaches and vice versa. In practice, the selection of an inquiry approach is not an "either-or" choice for the evaluator; rather it is a conceptual and technical selection decision that must be keyed to the questions being asked, to existing knowledge of the phenomena being studied, and to the constraints on inquiry that will shape evaluation design considerations. The best evaluation plan will usually be a composite of approaches and will be open to change as information is received.

What is it about the questions being asked that would lead the evaluator to use (or not use) case studies? Case studies can help us to understand processes of events, projects, and programs and to discover context characteristics that will shed light on an issue or object. If the questions being asked in an evaluation include ones about how certain events, outcomes, or observations might be accounted for or about alternative, but plausible, explanations for phenomena that are observed, case studies can be significant sources of insights and new interpretations.

I was having lunch in our faculty dining room not long ago and overheard a conversation between our (now recently departed) Athletic Director and a few members of his coaching staff. The athletic director was saying to one coach that he realized that the coach had been reporting problems with the football team workouts for weeks, but that he (the athletic director) really didn't understand the problem until he took part in the drills himself. The conditions under which the team had to work were unbearable for him, and he was immediately able to pinpoint contributors to the problems. The athletic director said, "I wouldn't have known without being there myself." This illustrates the importance, I believe, of gathering contextual and process information as part of most evaluations so that outcome observations can be interpreted with validity. Reports from others, summary statistics, and technical documents do not convey the same information that firsthand experience can provide. Firsthand experiences also require sufficient continous time on site to allow for a full grasp of the circumstances surrounding the object.

What is it about existing knowledge of the phenomena being studied that would lead the evaluator to use (or not use) case studies? At times, but I am becoming more and more convinced that such times are rare in education, the evaluator wil be studying phenomena that are well-understood and protected from extraneous noise. When there is a high level of certainty about the variables of interest (i.e., what to look for and how to measure it), the importance of doing case studies is diminished. One must ask how often evaluators are involved in studies of this type of education.

Several years ago, Egon Guba and David Clark prepared a series of papers dealing with the nature of research and other inquiry or inquiry-related processes in education. One of the important conceptual points that they developed in the materials was the need to define research objectives that are appropriate to the state of knowledge existing about the phenomena being studied. The following is a quotation from one of the papers (Guba and Clark, 1967).

> When a researcher first approaches a new area about which almost nothing is known, all that he can do is to develop phenomenological descriptions. he may describe what he sees in terms of certain variables (the beginnings of a conceptual framework) and he may make efforts to determine their amounts. Such qualitative and quantitative descriptions will be termed *depicting*, the first category of the research taxonomy. Once description has occurred in some detail, then it is possible to *relate*

the various depictions qualitatively, by comparison and contrast, or quantitatively through correlational and related techniques. When certain relationships have been established, a next step is to account for them through the development of conceptual frameworks in terms of which the relationships may be predicted, understood, and controlled. This process will be termed *conceptualization*, and may be carried out either analytically or synthetically. Finally, the conceptualizations will yield certain hypotheses which can be confirmed or rejected for the phenomenological world; this process will be termed *testing* (Guba and Clark, 1967, pp. 18-19).

Considering our developing awareness in educational research and evaluation of the influence of contextual variables and process variations which are most frequently unpredictable, one could build a good case for arguing that each evaluation should be approached as if it were a new area about which little is known.

Finally, what is it about the contraints on an evaluation that would lead the evaluator to use (or not use) case studies? There are a number of factors that enter into every evaluation that affect the determination of appropriate methods for carrying out the evaluation. Besides the considerations that I have already discussed (the nature of the questions being asked and the existing state of knowledge), one must take into account factors such as budget, available expertise, time, requirements of the client, and access to data. Case studies are labor intensive and hence are affected both by budget and the availability of expertise. I have found that the most critical decision an evaluator faces in considering the use of case studies is whether experienced field workers are able to spend the time necessary to complete the case studies. Perceptive case study inquirers who have proven track records are a scarce commodity, but they are the *sine qua non* of case study investigations in my experience. Budget demands are a function of the time on site needed to study an issue or event and the time needed to analyze field notes and write the case study. The more limited in scope the case study is, the less time and budget needed to support the effort. Since the time of a highly qualified professional is usually being bought, the price tag of a complex case study can be quite high. Add more sites, and the cost multiplies accordingly.

Requirements of the client can be troublesome for an evaluator wanting to include case studies in an evaluation plan. I have found that clients may need some education about the role that a case study will play in the evaluation and an accounting of what the case study will provide that other inquiry approaches will not. Case studies are not well understood by a large number of persons that evaluators must deal with, and so we have questions and comments such as "What good is a bunch of anecdotes?", "Hard date (usually meaning testing or experiments) will provide the only convincing information." and "Case studies are too subjective to be credible and they fail to get to the bottom line." I have found that by giving an example of what I consider to be a good case study and by analyzing with the client what was gained from the case study that would not have been available otherwise, I can usually justify the use of this method.

Gaining access to sites can also be tricky if the presence of an outsider is required (for interviewing or observation, for instance). I have seen that the case study inquirer can gain entry by giving something in return (serving as a teacher's aide, for example) and by guaranteeing anonymity. But there have been instances of subjects being embarrassed by previous case studies; and reactivity to tape recorders and notetaking can jeopardize case studies. Site selection can be biased if a number of "turn downs" occur and the case study is forced into a setting in which only willing participants are available. Cooperation in data gathering is an important consideration.

Aspects of the case study method that I believe qualify it as disciplined inquiry include

1. Having access to any and all data sources that are believed to be important for a systematic, balanced, and comprehensive study.

2. Leaving a data trail so that findings contained in the case study report may be traced, if desired.

3. Including confirmation steps in the case study procedures so that reported information has been thoroughly examined.

4. Including triangulation procedures in the case study, especially focused on salient findings, to enable one to determine the level of certainty one might place on conclusions.

5. Building a logical and empirical set of arguments to justify conclusions. Conclusions always need a link; they cannot exist independently of the data.

As a disciplined inquiry method, the case study is one of several approaches for gathering information and evaluating an object that is available to the educational evaluator.

Some Noteworthy Characteristics of Case Studies

An analysis of the case study method would be incomplete if it did not note some prominent idiosyncracies of the method. I have found analyses by Guba (1979), Stake (1980), and Wolcott (1980) to be helpful in gaining an understanding of some of these characteristics.

1. **Case studies depend on inductive reasoning.**
   An understanding of an issue, an event, or some object comes from the study of working hypotheses and concepts that arise from the data or are worked out in relation to data and other sources. It

emerges during the case study; discovery is an identifying characteristic.

2. **Case studies use a multiplicity of data.**
   Meaning comes from the complex assimilation of data from a number of sources and depends on both qualitative and quantitative assessments of the phenomena being studied.
3. **Case studies are descriptive.**
   The end product contains representations of complex realities. Prescription and reductionism are not characteristics that should be expected in case studies by themselves.
4. **Case studies are specific.**
   One should not expect a case study to reveal the extent to which findings will exist in other settings, times, or with other actors. Instead, one might ask "What is this case representative of?" The particular case is important in and of itself for revealing information about the phenomena being studied.
5. **Case studies have heuristic value.**
   Previously unknown relationships and variables can be expected to emerge from case studies leading to a rethinking of the phenomena being studied. Insights into how things get to be the way they are can be expected to result from case studies. As such, they can put meat on the bones of data collected in an evaluation using other methods.
6. **Case studies cannot be standardized.**
   Because of the idiosyncracies of contextual interventions and process variations, case study instruments, data collection, and data analysis plans cannot be prespecified. At best, steps found in any form of disciplined inquiry may be listed at the beginning of the case study; for example, data confirmation steps, delimitations of the study, and stages of the inquiry process.

Summary

I began this analysis by defining my conception of the domain of disciplined inquiry and by placing the evaluation process within that domain. I then identified the case study as a method of disciplined inquiry that could be used in an educational evaluation. This view of case studies as disciplined inquiry is very different from the one communicated by Campbell (1976), who associated qualitative methods with common sense understanding, intuition, and ordinary perception. The decision of when to use case studies in evaluation is dependent on several considerations, some of which I have identified. Finally, I listed some prominent characteristics of the case study method which may be considered strengths or weaknesses, depending on the circumstances surrounding the initiation of the evaluation.

Case studies can contribute in meaningful ways to the evaluation process. Alone, they are not meant to be evaluative and cannot be conceived of as an evaluation approach. As Stake (1980) indicated in his recommendations to those considering case study research,

> ...case studies provide readers with knowledge about the actual workings of education, and particulars about how people value and commit themselves to various goals. They provide little proof for the explanations or verification of programmatic decisions. Regularly they tell a story of complexity and idiosyncracy, reiterating that education is largely a matter of personal interaction which often does not conform to general expectation nor find government regulation pertinent (Guba, 1979).
>
> Case studies sometimes make official action more difficult, rather than easier, because they challenge the overly-simplistic models of some policy makers. Contributions from this research may occur in the form of restraining ill-considered plans more than in forging effective plans. Much of the justification for supporting naturalistic case studies must be based on a belief that greater understanding of the particular workings of education will be useful to readers (Stake, 1980, pp. 1-2).

Stake's recommendations comprise an important document for those interested in using case studies in educational inquiry. The decision the evaluator must address when considering the use of the case study method is whether the contributions this approach can make to our understanding of the object being investigated are worth the investments of time, personnel, budget, and subject or client anxiety.

Being as compulsive as I am and guessing that at least a few people expected some direct adversary commentary on case studies methods, I will end this presentation with an adversary statement (even though I stated at the beginning that I would not do so).

I would tend not to use case studies in a program evaluation if:

1. The sole criterion for determining value was the output level of the program or the testing of specific cause-effect relationships.
2. Sufficient information about program processes and context already existed.
3. Qualified case study investigators were not available.
4. Insufficient time or funds were available.
5. The client expected a simple answer.

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Among his recent publications are several books including: ***Beyond the Numbers Game: A Reader in Education Evaluation, Understanding Classroom Life,*** and ***Rethinking Educational Research.*** He has written extensively on the history and philosophy of research and on naturalistic inquiry.

Constance L. Leean's varied background has included such disparate roles as playwright, dean, futurist, elementary teacher, religious educator, special educator, adult educator, and evaluator. Currently, she is an Assistant Professor in the College of Education at the University of Vermont where she also serves as the principle investigator for an NIE-supported adult learning project.

Dr. Leean teaches courses in adult education, foundations of education, futures, and evaluation. She conducts research and publishes in each of these areas, as well.

Robert E. Stake was born in Nebraska. He now lives in Illinois. In between, he studied at the University of Nebraska and Princeton receiving his Ph.D. from the latter in psychology. Somewhere along this path his interests shifted from mathematics and psychometrics to evaluation, particularly case studies. The profession of evaluation is much the better for it.

Oh yes, he directs the Center of Instructional Research and Curriculum Evaluation and professes in educational psychology at the University of Illinois. One of his recent publications, "Seeking Sweet Water" seems to accurately portray his current research and evaluation interests.

James R. Sanders is a Professor of Educational Leadership and Associate Director of the Evaluation Center at Western Michigan University. A graduate of the University of Colorado, he is a co-author of the popular text, ***Educational Evaluation: Theory and Practice.***

Dr. Sanders is an active practitioner in the evaluation community serving on professional boards, teaching, consulting, doing research, and conducting evaluation studies. This wide range of experiences in all aspects of the profession makes him well qualified to comment on the role of case studies in educational evaluation.